

Product Name: Dirithromycin

Product Number: D033

CAS Number: 62013-04-1

Molecular Formula: $C_{42}H_{78}N_2O_{14}$

Molecular Weight: 835.1

Appearance: White solid

Storage Conditions: -20°C

Description: Dirithromycin is a macrolide antibiotic pro-drug of 9S-erythromyclamine, a close analogue of erythromycin in which the 9-keto group is replaced with an amino group in the S-configuration. Although erythromyclamine overcomes the acid instability of erythromycin, it is poorly absorbed following oral administration. Dirithromycin is formed by reacting erythromyclamine with an aldehyde to form a Schiff base which undergoes cyclisation to an oxazine with the C11-alcohol. Dirithromycin provides higher tissue levels and prolonged in vivo half-life by slowly releasing erythromyclamine.

Dirithromycin is soluble in ethanol, methanol, DMF and DMSO.

References: Synthesis and antimicrobial evaluation of dirithromycin (AS-E 136: LY237216), a new macrolide antibiotic derived from erythromycin. Counter F.T. et al. Antimicrob. Agents Chemother. 1991, 35, 1116.

Dirithromycin: Introduction and historical development. Kirst H.A. Drugs Today 1995, 31, 89.